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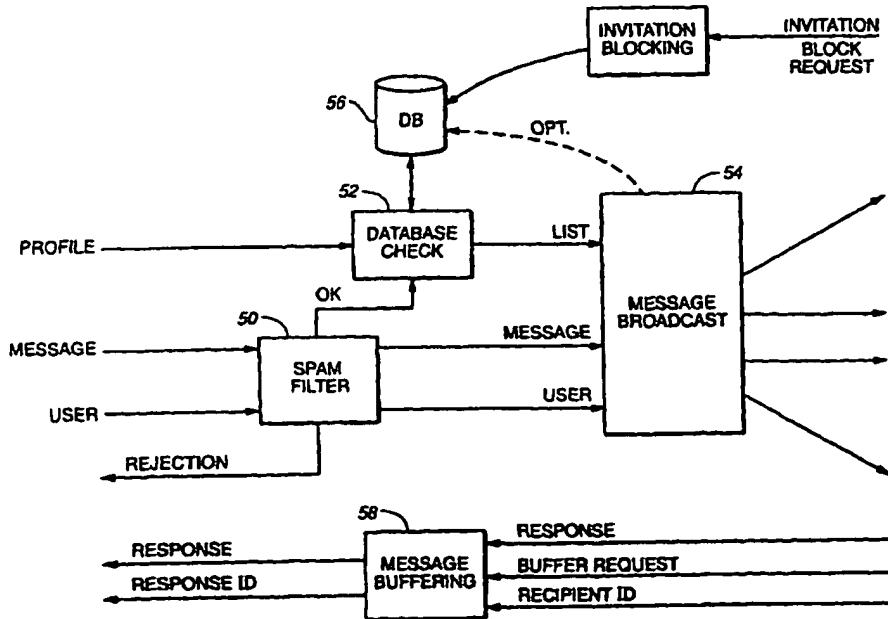
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(54) Title: DATABASE-BASED INTERNET INVITATION SYSTEM



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(57) Abstract: A messaging system is connected provided in a server operably connected to user computers across the Internet. The user provides a message and profile information which is sent to the server. The server produces a list of recipients from the profile information and provides the message to the recipients listed, without providing to the user the names or E-mail information for any of the recipients.



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DATABASE-BASED INTERNET INVITATION SYSTEM

Background of the Invention

The present invention relates to messaging systems over the Internet.

5 The Internet, being a highly connected computer network, is profoundly changing messaging systems. Messaging systems over the Internet tend to be of two categories. The first category is direct messaging systems. These direct messaging systems include E-mail and instant message systems. Each of these direct messaging systems gives a user access to the recipient's E-mail or personal address. Some Internet service providers have member directories that allow searching to find members with certain interests. Once the user finds a member in the directory, the user can then send this person an E-mail. The problem with such a system is that the recipient may not wish to allow such general access from the public since it can result in "spam" or other unwanted E-mails.

15 The second type of messaging system are meeting-place messaging systems. A meeting place could be, for example, an Internet bulletin board, in which users post messages and make comments based upon the messages posted. A downside of meeting-place messaging systems is that these systems also allow for access to member E-mail addresses.

20 It is desired to have a new model for messaging systems on the Internet that avoid some of the problems with the prior art.

Summary of the Present Invention

The present invention is an invitation messaging system. A user (the "sender") provides a message along with profile information. A server uses the profile information to search a database to produce a list of people to whom the message is sent. This message is then provided to the people on the list (the

"recipient"), without the names and E-mail information for this list of people being available to the user.

This system has the advantage that it cannot be used to obtain the E-mail addresses for a list of people to send unwanted messages or spam. The recipients 5 do not feel pressured by the messages because they know that they are anonymous to the sender. Thus, the recipients do not feel obligated to respond to the messages. In one embodiment, these messages are provided on a dynamically created web page separate from the recipient's E-mail system.

One embodiment of the present invention uses a spam filter at the server to 10 check the messages and/or users before sending the messages to the recipients. In this way, commercial messages can be weeded out by the system. In one embodiment, the system uses invitation filtering information from the recipients to selectively block messages.

In an additional embodiment of the present invention, responses from the 15 recipient to the user are sent through the server so that these responses can be buffered to produce anonymous responses to the user. Thus, the recipient can respond to a message without supplying a name or E-mail address to the user.

Brief Description of the Drawings

Fig. 1 is a diagram of a messaging system of one embodiment of the 20 present invention.

Fig. 2 is a diagram that illustrates the operations of a server in one embodiment of the present invention.

Fig. 3 is a diagram that illustrates a message and response for one embodiment of the present invention.

25 Fig. 4 is a diagram that illustrates the arrangement of the database in one embodiment of the present invention.

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Fig. 5 is a diagram that illustrates a dynamically created web page used to display invitations in one embodiment of the present invention.

Detailed Description of the Preferred Embodiment

5 Fig. 1 is a diagram that illustrates one embodiment of the messaging system
of the present invention. The messaging system 20 includes a user computer 22
running a web browser 24. When the user wishes to send a message using the
messaging system of the present invention, the user uses the web browser 24 to go
to a web page run by the web server 26. The user creates a message and provides
10 profile information of the recipients of the message. For example, if the profile
information "photography" is provided, the message is sent to people whose hobby
is photography. The message and the profile information is sent to server 26.
15 The server 26 includes spam-filtering software 28 which filters the messages. The
profile information is used to search the database 30 to obtain a list of recipients.
In this example, the message is provided to the recipient computers 32, 34 and 36.
19 The message may be sent via E-mail or by using a dynamically created web page.

Note that the E-mail addresses and names of the recipients are not provided to the user. The message is sent to recipient computers without the user knowing who these recipients are.

The server 26 is adapted to have a message-buffering program 40. A response to be buffered is sent from the recipient computer to the server 26 and then a buffered response, not including the name and E-mail address of the recipient, is provided to the user computer 22. The recipient can send a direct E-mail response to the user's computer 22 if the recipient desires to provide name and E-mail address information to the user.

25 Fig. 2 is a diagram that illustrates the operation of one embodiment of the
server. The user provides profile information and a message to the server.

The message is checked in the spam filter 50 to make sure that the message is not of a commercial or otherwise inappropriate nature. The user information is also checked by spam filter to see whether the user is a blocked user for the invitation system. If the spam filter okays the transmission of the message, the profile 5 information is sent to the database checking program 52. This database checking program then produces a list of recipients. The list of recipients is provided, along with the message and user information, to a message broadcast software 54, and the message is then provided to the recipients. This can be done using E-mail or optionally by changing data in the database 56 which is used to produce a 10 dynamically created web page as described below.

A response can be sent to the message buffering program 58. In that case, the recipient identification information, such as name and E-mail address, is stripped from the message and a response I.D. created. The response I.D. is preferably created for each response. The response, stripped of the identifying 15 information for the recipient, is then sent to the user.

Fig. 3 is a diagram that illustrates the sending of messages in the system of the present invention. A message, along with the profile information 70, is sent to the server 72. The server checks the profile and then produces the messages, such as the message 74 to John Smith and message 76 to Mary Wilson. Note that the 20 sender, Martha Jones, does not receive the name or E-mail address of the recipients of the message. If one of the recipients desires to send a buffered response, the response is sent to the server which strips the name and E-mail information of the recipient, Mary Wilson, and sends an anonymous message 82 to Martha Jones. A non-buffered response may also be sent.

25 Note that the system of the present invention is well suited to producing invitations to create affinity groups and the like, due to the lack of perceived pressure to respond on the recipients and the protections to the recipients provided by the anonymity of the buffered response. The system of the present invention

also works well for the anonymous transfer of expert advice. For example, the user can request information from a number of people, and the recipients of the request feel no undue pressure to respond because the recipient can respond anonymously.

5 Fig. 4 illustrates a database arrangement for one embodiment of the present invention. Fig. 4 shows a relational database 90. This database has a hobby table,
92, an occupation table 94, and a name table 96. The profile information provided
by the user, such as the profile information "hobby is photography," is used to
check the database. The database is searched for keys corresponding to the hobby
10 "photo-graphy." In this example, the keys 001 and 002 are associated with the
hobby "photography." The keys 001 and 002 are then used in table 96 to get a list
of E-mail addresses to send the message. The message body is then sent using the
E-mail address of each of the recipients. Note that key 003 is not returned because
"photography" is associated with occupation rather than hobby.

15 An alternate system using a dynamically created web page uses tables such
as Tables 98 and 100. Each invitation message created is associated with a pointer
to the message block. The recipients of a message are associated with an
invitation number. Thus, when a user goes to the web page for the user's
invitations, a web page is dynamically constructed by searching the database 90 for
20 invitations corresponding to the user's key number.

Fig. 5 illustrates this in more detail. The recipient's computer 104 with a
web browser 106 produces the dynamically created web page 108. The
dynamically created web page is a personal invitation page for a user of the
system. For example, when the user clicks on a personal invitation page, the
25 server produces an HTML document constructed from database 90.

Looking at Fig. 4, Table 100 is checked to see the invitations for the key
001 corresponding to John Smith. Invitations 576, 845 and 761 are found. In this
example, invitation 576 corresponds, in Table 98, to a pointer to the message from

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Martha Jones. This message is then displayed at the recipient's web browser 106. The advantage of the message with the dynamically created web page rather than a traditional E-mail type message is that the messages are not considered as intrusive by the recipient since the recipient only needs to see the invitations when they go to the dynamically created web page. The messages don't clog up the recipient's work or home E-mail system.

*Recip
profile
Member
informati*

10 Looking again at Fig. 4, in one embodiment of the present invention, the system has an invitation blocking entry for some of the tables. For example, John Smith is a lawyer but does not wish to receive invitations sent to lawyers, and he can block such invitations. In that case, the server accessing the profile information "lawyer" in the database 90 will not send a message to John Smith. Note that the John Smith does want to receive invitations with respect to his interests in "photography" and "baseball."

15 The database 90 with category-based information would best be constructed using a system that easily obtains the category-type information from users. In a preferred embodiment, a web page builder using the category information is obtained using category input tools used in the creation of web pages. Details of such a system are described in the patent application "Web Page Builder Using Category Input Tools," corresponding to Attorney's Docket No. 032845-001, filed 20 on 08 March 2000, given the Serial No. 09/470,314, which is incorporated herein by reference.

25 It will be appreciated by those of ordinary skill in the art that the invention can be implemented in other specific forms without departing from the spirit or central character thereof. The presently disclosed embodiments are therefore considered in all respects to be illustrative and not restrictive. The scope of the invention is indicated by the appended claims rather than the foregoing description, and all changes which come within the meaning and range of equivalence thereof are intended to be embraced herein.

Claims:

1. Method comprising:
 - receiving from a user computer across the Internet a message and profile information;
 - 5 producing from a database using the profile information a list of people to provide the message to; and
 - providing the message to the list of people without providing to the user the names or E-mail information for any of the list of people.
2. The method of Claim 1 wherein the providing step comprises sending E-mail containing the message to the list of people.
- 10 3. The method of Claim 1 wherein the providing step comprises creating a dynamic web page displaying the message for one of the list of people.
4. The method of Claim 1 wherein the message is filtered by spam-filtering software before provided to the list of people.
- 15 5. The method of Claim 1, further providing the step of buffering a response from one of the list of people by providing the response to the user but not providing to the user the names or E-mail information for the one of the list of people.
6. The method of Claim 1 wherein the database contains information provided by a category-based input tool on a web page builder.

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7. A messaging system comprising:
 - a database; and
 - a server operably connected to the server, the server operably connected to a user computer across the Internet, the server adapted to receive from the user computer a message and profile information, the server adapted to produce from the database using the profile information a list of people to provide the message to, the server adapted to provide the message to the list of people without providing to the user the names or E-mail information for any of the list of people.
8. The messaging system of Claim 7 wherein the server provides messages to the list of people by sending E-mail messages containing the message to the list of people.
9. The messaging system of Claim 7 wherein the server provides the message to the list of people by providing a dynamically created web page containing the message to one of the list of people.
10. The messaging system of Claim 7 wherein the server is further adapted to spam-filter the messages.
11. Method comprising:
 - receiving from a user computer across the Internet a message and profile information;
 - producing from a database using the profile information a list of people to provide the message to;
 - providing the message to the list of people without providing to the user the names or E-mail information for any of the list of people; and

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buffering a response from one of the list of people by providing the response to the user without providing to the user the names or E-mail information for the one of the list of people.

12. The messaging system of Claim 11 wherein the providing step
5 comprises sending E-mail messages containing the message to the list of people.

13. The messaging system of Claim 11 wherein the server provides the message to the list of people by providing a dynamically created web page containing the message to at least one of the list of people.

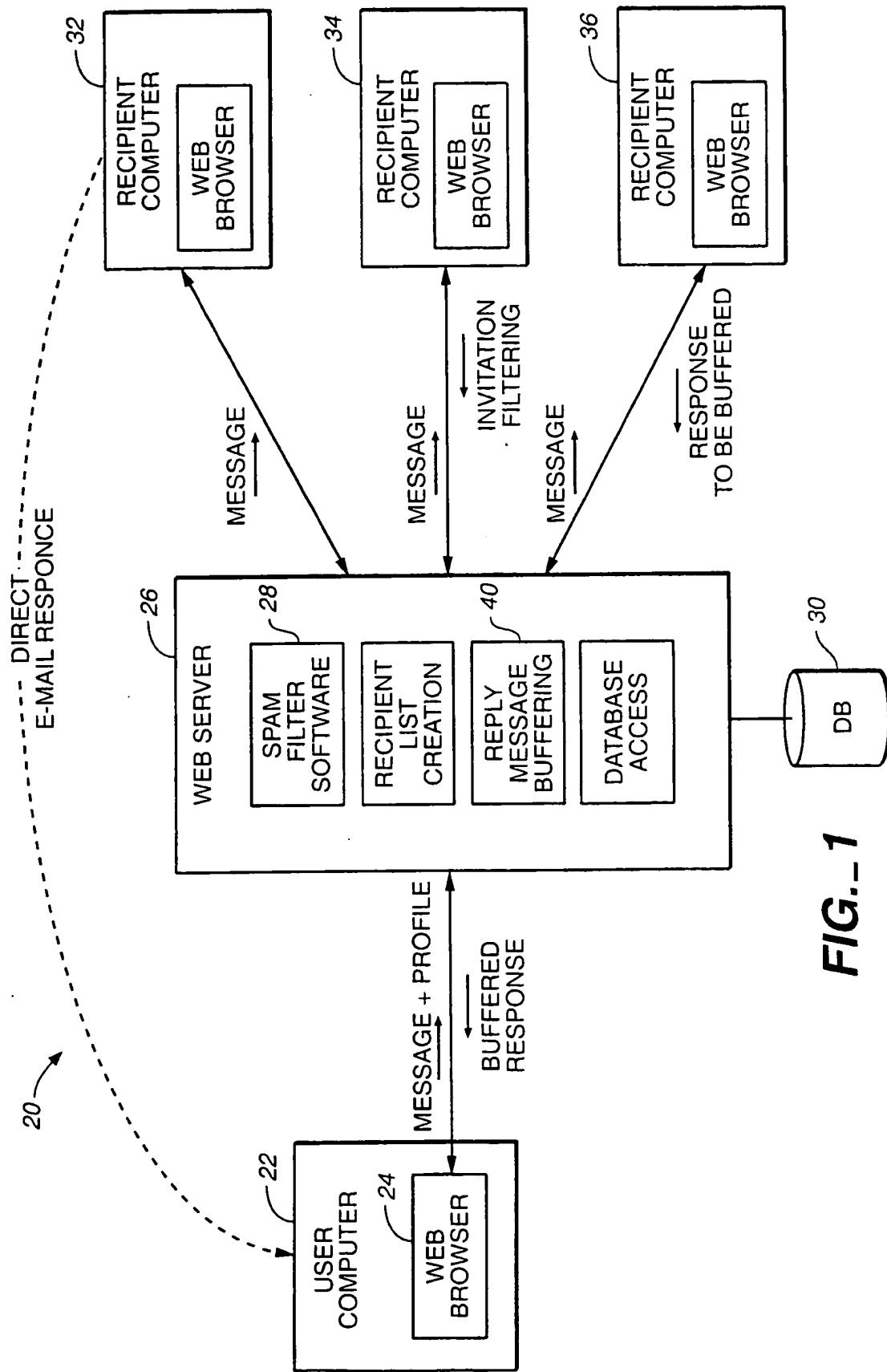
14. The messaging system of Claim 11 wherein the server further
10 provides spam-filtering the message to the list of people.

15. A messaging system comprising:
a database; and
a server operably connected to the server, the server operably connected to
a user computer across the Internet, the server adapted to receive from the user
15 computer a message and profile information, the server adapted to produce from
the database using the profile information a list of people to provide the message
to, the server adapted to provide the message to the list of people without
providing to the user the names or E-mail information for any of the list of people,
the server further adapted to buffer a response from one of the list of people by
20 providing the response to the user without providing to the user the names or
E-mail information for the one of the list of people.

16. The messaging system of Claim 15 wherein the server is adapted to provide the message to the list of people by sending an E-mail containing the message to the list of people.

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17. The messaging system of Claim 15 wherein the server is adapted to provide the message to the list of people by producing a dynamically created web pages which contain the message that can be accessed by the list of people.



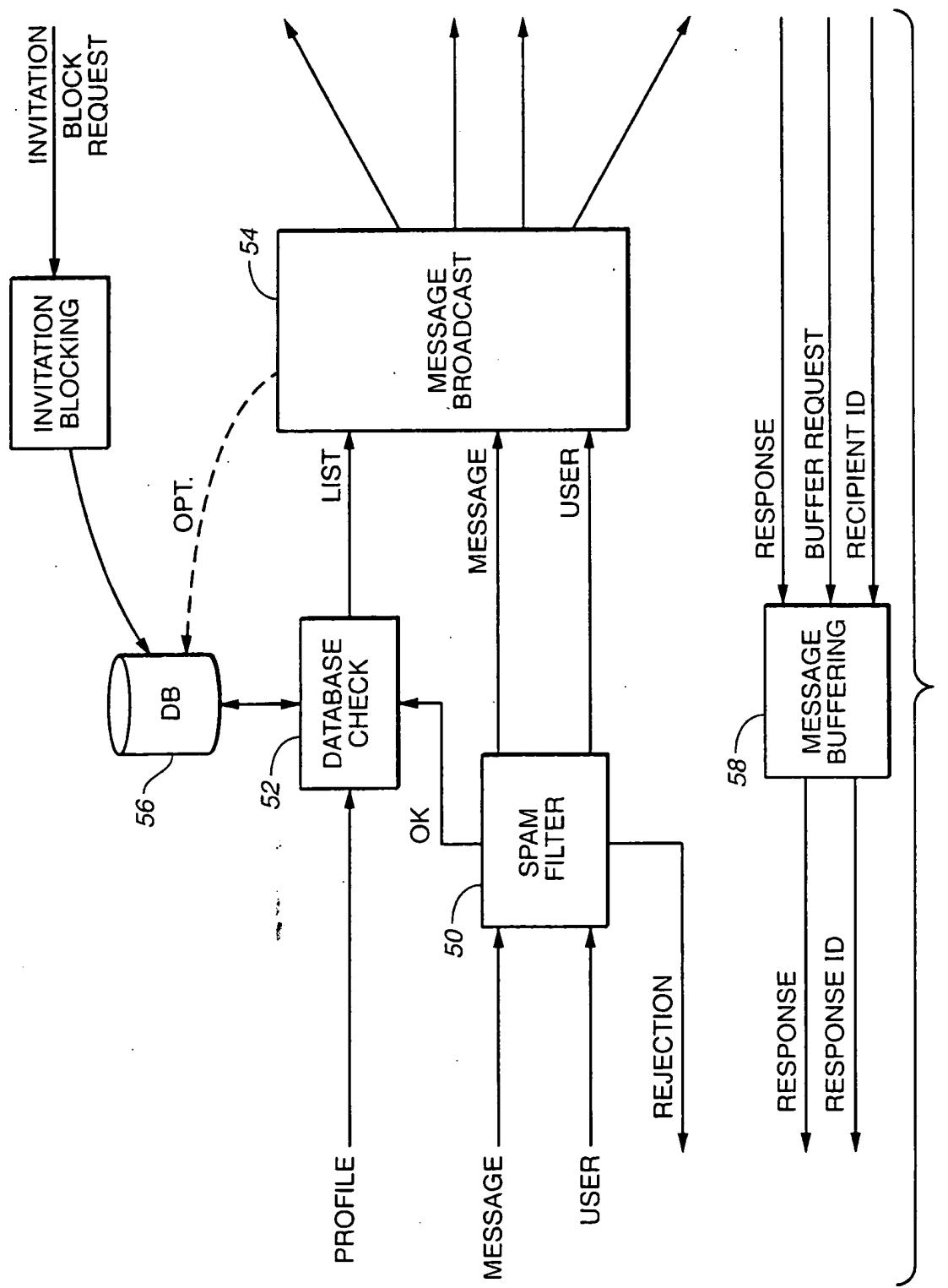
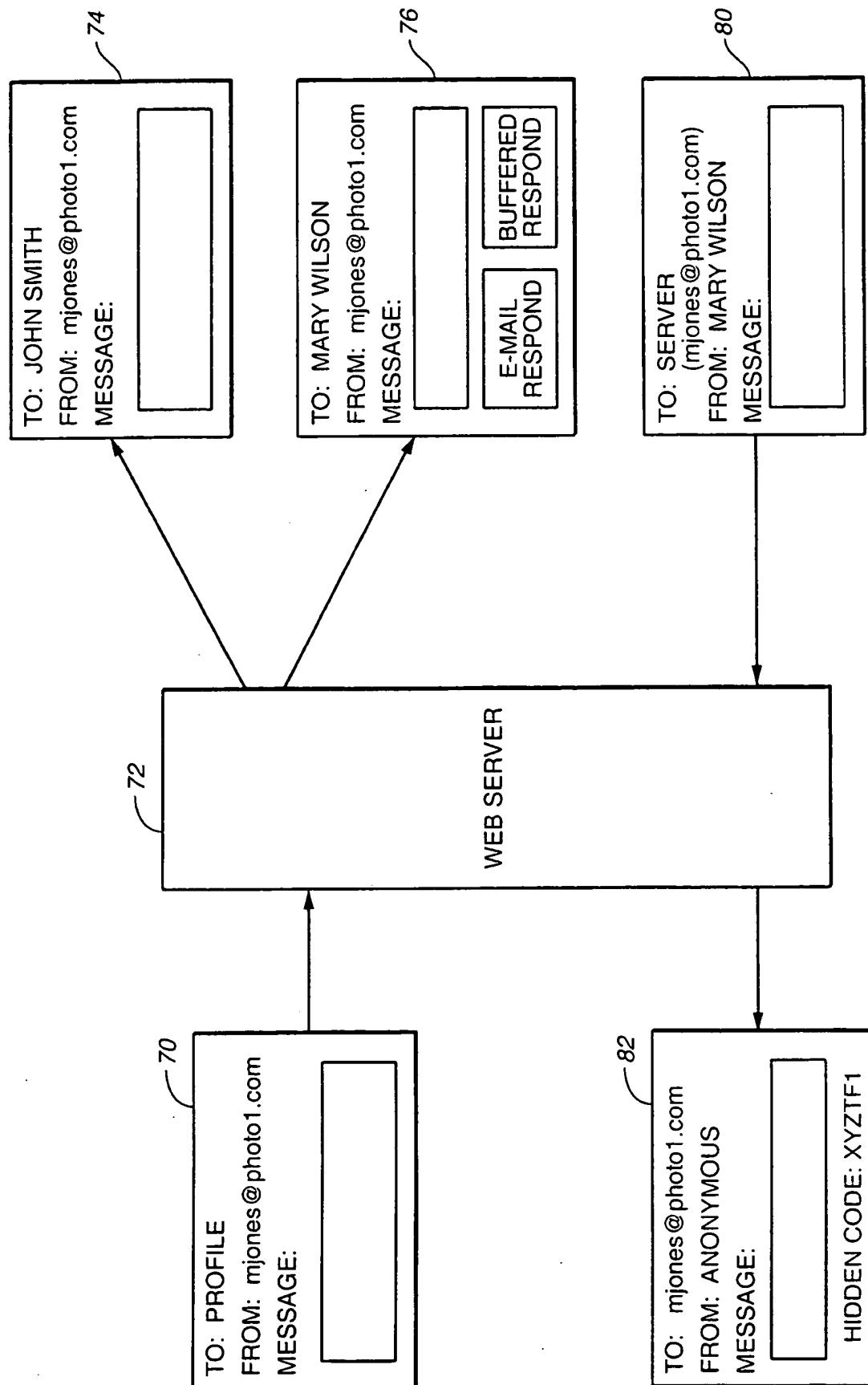


FIG. 2

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**FIG.-3**

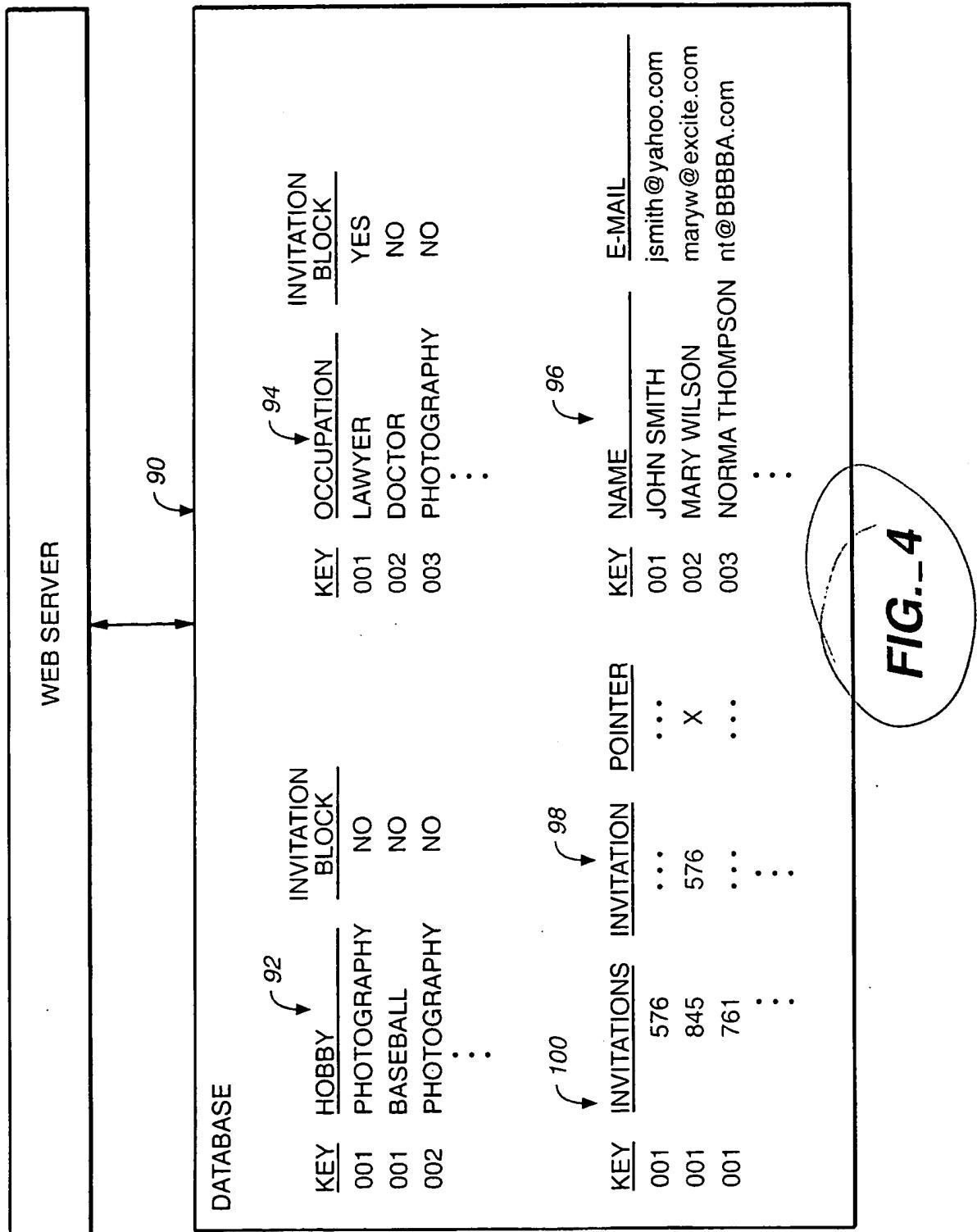
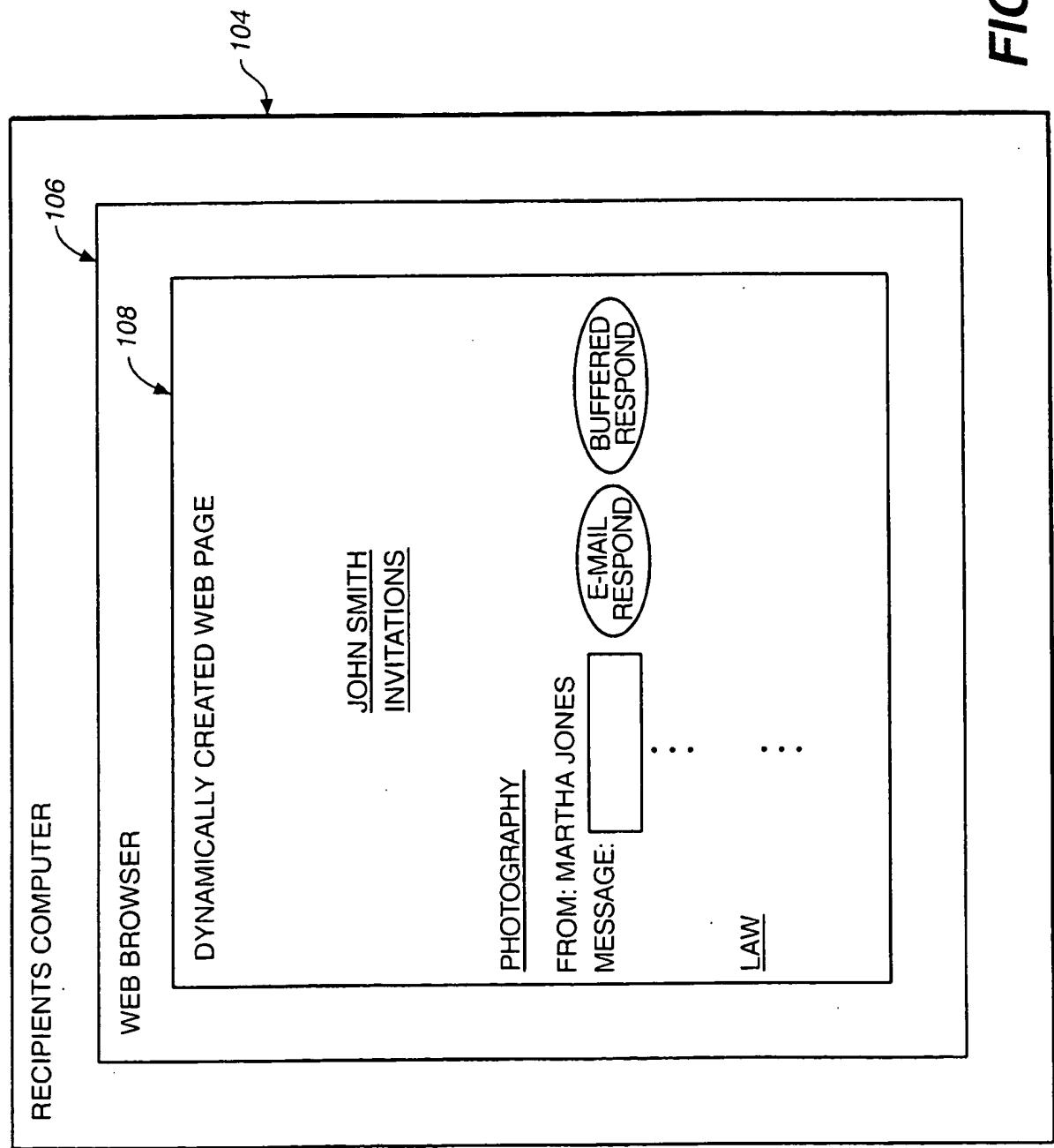


FIG. 5



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